

HERMON-TAYLOR et al  
Appl. No. 09/646,568  
Attny. Ref.: 117-319  
Response  
September 15, 2010

The claims of the present application refer only to SEQ ID NOs:1-4 and sequences of the Sequence Listing of record in the PTO IFW.

Further clarification is requested regarding the Examiner's reference to SEQ ID NOs: 5-29 in claims filed June 20, 2000 (see Examiner-initiated Interview Summary dated August 19, 2010), in the event the Examiner continues to believe that a further Sequence Listing is required.

Specifically, the present application was filed as a U.S. national phase of International Application No. PCT/GB99/00849 with a Transmittal dated and received in the U.S. Patent Office on September 20, 2000, as evidenced by the following copy of the Transmittal obtained from the PTO PAIR IFW:

HERMON-TAYLOR et al  
Appl. No. 09/646,568  
Attny. Ref.: 117-319  
Response  
September 15, 2010

532 Rec'd PCT/PTC 20 SEP 2000

FORM PTO-1380 (REV. 11-98)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S COCKET NUMBER <b>117-319</b>
<b>TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371</b>		<b>09/646568</b> To Be Assigned
INTERNATIONAL APPLICATION NO. <b>PCT/G899/00849</b>	INTERNATIONAL FILING DATE <b>18 March 1999</b>	PRIORITY DATE CLAIMED <b>20 March 1998</b>
TITLE OF INVENTION <b>DIAGNOSTICS AND VACCINES FOR MYCOBACTERIAL INFECTIONS OF ANIMALS AND HUMANS</b>		
APPLICANT(S) FOR DO/EO/US <b>HERMON-TAYLOR et al</b>		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.		
2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.		
3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).		
4. <input checked="" type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19 <sup>th</sup> month from the earliest claimed priority date.		
5. A copy of the International Application as filed (35 U.S.C. 371(c)(2)).		
a. <input type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau).		
b. <input checked="" type="checkbox"/> has been transmitted by the International Bureau.		
c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).		
6. <input type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)).		
7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)).		
a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).		
b. <input type="checkbox"/> have been transmitted by the International Bureau.		
c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has <b>NOT</b> expired.		
d. <input type="checkbox"/> have not been made and will not be made.		
8. <input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (U.S.C. 371(c)(3)).		
9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).		
10. <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).		
<b>Items 11. To 16. Below concern document(s) or information included:</b>		
11. <input type="checkbox"/> An Information Disclosure Statement under 37 C.F.R. 1.97 and 1.98.		
12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 C.F.R. 3.28 and 3.31 is included.		
13. <input checked="" type="checkbox"/> A <b>FIRST</b> preliminary amendment.		
<input type="checkbox"/> A <b>SECOND</b> or <b>SUBSEQUENT</b> preliminary amendment.		
14. <input type="checkbox"/> A substitute specification.		
15. <input type="checkbox"/> A change of power of attorney and/or address letter.		
16. <input checked="" type="checkbox"/> Other items or information. <b>PTO 1449 With International Search Report, Sequence Listing</b>		

HERMON-TAYLOR et al  
Appl. No. 09/646,568  
Attny. Ref.: 117-319  
Response  
September 15, 2010

The claims of International Application No. PCT/GB96/03221 refer to SEQ ID NOs: 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28 and 29 and it is perhaps the claims of International Application No. PCT/GB96/03221 which the Patent Office has mistaken for claims of the present application.

The Sequence Listing contained in the PTO IFW, with SEQ ID NOs: 1-5, is submitted to be complete and to allow the Examiner to search the claims of the present application. Any "discrepancy" between the claims, CRF and paper copy of the Sequence Listing entered in the PTO IFW is an error or "discrepancy" created and correctable by the Patent Office, and further papers from the applicants should not be required. The Patent Office CRF contains 5 sequences. The PTO IFW contains a copy of the applicants Sequence Listing containing SEQ ID NOs:1-5. The pending claims refer to the sequences of the applicants Sequence Listing.

The specification was amended with the Amendment filed November 6, 2001 to include the Sequence Listing as evidenced by the following reproduction of the first page of the Amendment and the following reproduction of the PTO date stamped copy of the Sequence Listing containing 5 sequences. The Sequence Listing was entered by the Patent Office and entered in the PTO IFW, as confirmed by the following subsequent page from the PTO IFW. Nothing further of the applicants should be required.

HERMON-TAYLOR et al  
Appl. No. 09/646,568  
Attny. Ref.: 117-319  
Response  
September 15, 2010



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED

NOV 2 8 2001

TECH CENTER 1600/2900

RECEIVED

NOV 8 8 2001

TECH CENTER 1600/2900

In re Patent Application of

HERMON-TAYLOR et al

Attny. Ref.: 117-319

Serial No. 09/646,568

Group: 1645

Filed: November 9, 2000

Examiner:

For: **DIAGNOSTICS AND VACCINES FOR MYCOBACTERIAL  
INFECTIONS OF ANIMALS AND HUMANS**  
\* \* \* \* \*

*HJ 1/6/02  
Toray*

November 6, 2001

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

**AMENDMENT**

Responsive to the Notification of Missing Requirements and Notice to Comply  
dated September 6, 2001 (copies attached), entry and consideration of the following  
amendments and remarks are requested.

**IN THE SPECIFICATION**

Amend the specification as follows.

Insert the attached Sequence Listing for the copy of the same filed with the  
application on November 9, 2000.

**REMARKS**

Reconsideration is requested.

The Declaration was filed on November 9, 2000, in response to the Notification of  
Missing Requirements mailed October 19, 2000. A copy of the Declaration is attached

574252

HERMON-TAYLOR et al  
Appl. No. 09/646,568  
Attny. Ref.: 117-319  
Response  
September 15, 2010



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED

NOV 28 2001

TECH CENTER 1600/2900

In re Patent Application of

HERMON-TAYLOR et al

Atty. Ref.: 117-319

RECEIVED

NOV 08 2001

Serial No. 09/646,568

Group: 1645

TECH CENTER 1600/2900

Filed: November 9, 2000

Examiner:

For: **DIAGNOSTICS AND VACCINES FOR MYCOBACTERIAL  
INFECTIONS OF ANIMALS AND HUMANS**  
\* \* \* \* \*

November 6, 2001

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

STATEMENT

The attached paper and computer-readable copies of the Sequence Listing are  
the same. No new matter has been added.

Respectfully submitted,

NIXON & VANDERHUYE P.C.

By: \_\_\_\_\_

B. J. Sadoff  
Reg. No. 36,663

BJS:eaw  
1100 North Glebe Road, 8th Floor  
Arlington, VA 22201-4714  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100

574255



SEQUENCE LISTING

<110> ST GEORGE'S HOSPITAL MEDICAL SCHOOL  
<120> DIAGNOSTICS AND VACCINES FOR MYCOBACTERIAL INFECTIONS  
OF ANIMALS AND HUMANS  
<130> N743688 DNE  
<140> US 09/646,568  
<141> 2000-09-11  
<150> PCT/GB99/00849  
<151> 1999-03-18  
<150> UK 9806093.2  
<151> 1998-09-20  
<160> 5  
<170> Patentin Ver. 2.1  
<210> 1  
<211> 1336  
<212> DNA  
<213> Mycobacterium avium

<400> 1  
gtgactgaag caatgagtg caactcggcg tgcggaagg ttccagtcgc ggttggctaa 60  
gacacccgaa gactactgga gtgcgtgcac aagcgcgcc ccctcgcggc tgaagccgaa 120  
tgcgaaggag tgcgaagatt ggcgaacatg cgaaggpyag aacggcctat gagcccgga 180  
caggttttcg accgcgcgc gaatgcactt aatgcgtgac gcttgggttt ggcgaacgga 240  
gtgatccat gagattcgt tccgttcact ggaactatgc cgtgagccgc gtgcgtccag 300  
ttacttgccc ttggaagcgt taatgatttc ttgcgggtct ccgcatatct catgactctg 360  
agctggcttc gcaaccgcca tccgcccac taattaccc ctagctgtct tgcattcttc 420  
ccgggtctat gactcgtct ctacttgacg gcgtttctca tcccttcgat aggtgtgggc 480  
gcccgaggcg gtgcgcgcg gaaactactg atgtcagcg ctcgactga gtatgtgcta 540  
aaagacagtg cggtttgat ggttaagttc gataccgta gcaacactcg cgaatttcca 600  
gttgcgggta ttggaacgg ttctctgtag acattgggtt gggaggtgct ttgctatata 660  
ggcgtgagag taattgttat gctcggcctt ctatctgcg gtgcgttctg tccagggata 720  
ttgatctcag agctgtcgt gtccgtgttc ttgcggcat gggaggaat acacgcgata 780  
gcttcacatg ctgcgcgatt cgtgtgagtg ttctcgccg gacgttgcg gatacaatc 840  
cgttaactga ttccggttc ggggtcttc gttgcgctcg gcttcaatct cgttgggttc 900  
tcctctccg tgcgtccga ctaccgttg gtgcgcgcg ttcgactgga gtacactaac 960  
atgccttcg gtgcgttat ccaacatca aggaagcgt tccgcacga tctatctat 1020  
ggagtatata tatatgctt tccacttcag caagtgtag tccgtgtgga atctgcgag 1080  
ataaatccaa tggattctg cgcgaattct gtgcagctt ttatgcgct cgcgcgcgc 1140  
agttggctct tggtagagaa accctgcgtg tccctggaag gctgttctg gtcgaataac 1200  
agttcaatry cgttagccta tatpaaagt ggtgatacag tccgcgcctc aaatgacatt 1260  
xccggaagcc gggccgctt taatggagag aaagccgag atctctcgc gccagaccca 1320  
agcrrgctt tctaa 1336

RECEIVED

NOV 28 2001

TECH CENTER 1600/2900

RECEIVED

NOV 08 2001

TECH CENTER 1600/2900

RECEIVED

DEC 07 2001

TECH CENTER 1600/2900

Page 1

OIFE

RAW SEQUENCE LISTING  
PATENT APPLICATION: US 09/646,568

DATE: 11/15/2001  
TIME: 09:01:02

Input Set : A:\N743688 US DMC LJB HF S3B seq listing Sept 01.txt  
Output Set: N:\CRF3\11152001\1646568.raw

3 <110> APPLICANT: ST GEORGE'S HOSPITAL MEDICAL SCHOOL  
5 <120> TITLE OF INVENTION: DIAGNOSTICS AND VACCINES FOR MYCOBACTERIAL INFECTIONS  
6 OF ANIMALS AND HUMANS  
8 <130> FILE REFERENCE: N743688 DMC  
10 <140> CURRENT APPLICATION NUMBER: US 09/646,568  
C--> 11 <141> CURRENT FILING DATE: 2000-11-09  
13 <150> PRIOR APPLICATION NUMBER: PCT/GB99/00849  
14 <151> PRIOR FILING DATE: 1999-03-18  
15 <152> PRIOR APPLICATION NUMBER: UK 9806093.2  
17 <151> PRIOR FILING DATE: 1998-03-28  
19 <160> NUMBER OF SEQ ID NOS: 5  
21 <170> SOFTWARE: PatentIn Ver. 2.1  
23 <210> SEQ ID NO: 1  
24 <211> LENGTH: 1335  
25 <212> TYPE: DNA  
26 <213> ORGANISM: Mycobacterium avium  
28 <400> SEQUENCE: 1

ENTERED

```
39 gtagctgaag caaatgagtg caactcggcg tagcgaaagg ttctagtgcc gggtgagcaa 60
30 gacacggcaa gactactgga gtagctgcac aagcgccccc agctcggggg tgaagaggaa 120
31 tgcgaagggg ttgcgaagctt gagcaacatg cgaagggggg aacggccctat gagcctggga 180
32 aaggttttgc aacccggcgc gaattgcact aatgcgaggg gttcgtgttt ggcgagcgga 240
33 gtgatactat ggcatttggt tccgcacact ggaagtatgc cgtgggcgcc gtingtccag 300
34 ttgcttgccc ttggtatgct tgaatgttcc ttgcggtctt caggtctatct catcgtctcg 360
35 agctgcttcc gcaacccgca tcccgcccaa tacttcaacg atcgatgtct cgtattctc 420
36 ccggtctctg ggaatgtct catcttgacg ggtttgtcca tgcctccgat aggtgtgggc 480
37 gccagggggg gttcggccgc gaaactactg atgtccggcg ctccgatacg gtatgtgcta 540
38 aagacacatg cgttttggat ggttaagttc gatctcggg gcaacccctc cgtatttcca 600
39 gttcggggta ttgggaacgg ttccctgttg acattgggtt gggaggtgct ttgcctatac 660
40 ggcgtagcag tatttggtat gctcggactt cttagtcgcc gttggttggc tccaggggta 720
41 ttgatactgg cgtgtctgtg gtgggtgttc ttgcgggcac ggggcgggaa aacccggatc 780
42 gctccaatg atcgccgact cgtgtgtgtg ttctcggcgg ggcgttgcct gtatcaattc 840
43 cgtaacgtga ttccggctcg gttgtccttc gttcggctcg gcttcattat cgttgtggtt 900
44 tctctgcgag tctgcgggga ctaccggctg gtcggggccc ttcgatggc gtacctatc 960
45 atgcttgcgg gttcgtcact acaaatcaca aggatgggt tccgcaccca tctatcttat 1020
46 ggaatataca ttatgcgtt tccaatccag caagtgtgag tccgtgtgtg attcgcggag 1080
47 ataattcaca tgcctttctg cgcgatttct gtccgagcta ttctgcgct cgcggcgcta 1140
48 agttggttct tggtcgagaa accgtgcttg tccgtgagga gtgcgtcccg gcggcaaac 1200
49 agttcaattg cgtcagccaa tatggaggt ggtggatcag tccggcgcct aatgacatt 1260
50 cccgggaagg gggcccgctt tattggcgag aaagccgaag atctccccc gcgagccca 1320
51 agacgggtt tgtaa 1335
```

53 <210> SEQ ID NO: 2  
54 <211> LENGTH: 144  
55 <212> TYPE: PRN  
56 <213> ORGANISM: Mycobacterium avium  
58 <400> SEQUENCE: 2  
59 Val Thr Glu Ala Asn Glu Cys Asn Ser Ala Ser Arg Lys Val Ser Val  
60 1 5 10 15

HERMON-TAYLOR et al  
Appl. No. 09/646,568  
Attny. Ref.: 117-319  
Response  
September 15, 2010

An early and favorable Action on the merits is requested. The Examiner is again requested to contact the undersigned, preferably by telephone, in the event anything further is required.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By:                     /B. J. Sadoff/                      
                    B. J. Sadoff  
                    Reg. No. 36,663

BJS:  
901 North Glebe Road, 11th Floor  
Arlington, VA 22203-1808  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100